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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,547	08/27/2003	Messay Amerga	020683	7595

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QUALCOMM INCORPORATED
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EXAMINER	
AGHDAM, FRESHTEH N	
ART UNIT	PAPER NUMBER
2611	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	02/05/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/650,547	AMERGA ET AL.	
	Examiner	Art Unit	
	Freshteh N. Aghdam	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/14/2006 has been entered.

Response to Arguments

Applicant's arguments, see page 6, filed 11/14/2006, with respect to the rejection(s) of claim(s) 1-21 under Aikawa have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Dahlman et al (US 6,526,039).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 5-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claim 5, the claim contains subject matter of adding an integer multiple of the number of chips in a slot to the search result prior to comparing that is not described in the specification as to why adding an integer multiple of number of chips in a slot to the search result prior to comparing would benefit the system.

As to claim 6, the claim contains subject matter of adding an integer multiple of the number of chips in a slot to the stored offset prior to comparing that is not described in the specification as to why adding an integer multiple of the number of chips in a slot to the stored offset prior to comparing would benefit the system.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 7-8, 11, 13,16- 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Dahlman et al (US 6,526,039).

As to claims 1,16, 20, and 21, Dahlman discloses a method of and/ or apparatus for searching comprising correlating a received signal with a synchronization sequence to produce a first plurality of search results, each search result comprising at least one of an energy indicator or an offset (Fig. 1, means 108); and comparing a stored offset from a previous search with the offset of a search result of the first plurality of search results and removing the corresponding search result from the first plurality of search results when the search result offset is within a predetermined threshold of the stored offset (Fig. 1, means 110, 112, and 114; Col. 6, Lines 37-67; Col. 7, Lines 1-45).

As to claims 2 and 17, Dahlman discloses storing a first plurality of scrambling code identifiers and associated offsets, the stored offset selected therefrom (Fig. 1, means 106).

As to claim 3, Dahlman discloses a receiver for receiving a signal from a base station generating the received signal therefrom (Fig.1).

As to claims 7 and 18, Dahlman discloses correlating the received signal with a scrambling code over a search window to produce a list search result (Fig. 1, means 116).

As to claim 8, Dahlman discloses initiating cell search using the selected scrambling codes from neighboring cell list (Fig. 1, means 106), wherein the cell searching includes correlating the received signal with a scrambling code over a search window to produce a list search result (i.e. step 3); and searching a search window around the offset associated with one or more of the first plurality of search results (i.e. reduced complexity step 1) using one or more scrambling codes identified by the one or

more of the stored second plurality of scrambling code identifiers (i.e. step 2 using a stored secondary synchronization sequence; Col. 2, Lines 38-67).

As to claim 11, Dahlman discloses that the first plurality of code identifiers corresponds to previously identified cells (Fig. 1, means 106).

As to claim 13, Dahlman further discloses that the predetermined threshold is variable, increasing with an increase in a time lapsed since the associated offset was determined (Fig. 1, means 106; Col. 7, Lines 22-45).

As to claim 19, Dahlman discloses that the scrambling code is selected from a neighbor list (Fig. 1, means 106).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahlmen et al, and further in view of Papageorngiou et al (US 2004/0100935).

As to claim 4, Dahlman discloses all the subject matter claimed in claim 1, except for the received signal comprising a scrambling code transmitted over a plurality of slots and a synchronization sequence repeated during each slot. Papageorngiou discloses that the received signal comprising a scrambling code transmitted over a plurality of

slots and a synchronization sequence repeated during each slot in order to establish slot synchronization (Pg. 1, Par. 2; Pg. 3, Par. 62). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Papageorngiou with Dahlman for the reason stated above.

As to claim 14, Dahlman discloses a secondary synchronization sequence to identify the frame timing and a unique subset of scrambling codes (i.e. step 2; Col. 2, Lines 38-67).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dahlmen et al.

As to claim 12, Dahlman discloses that the predetermined threshold is variable and increases as the time lapsed increases (Fig. 1, means 106; Col. 7, Lines 22-45). Dahlman is not explicit about the threshold being a fixed value. However, one of ordinary skill in the art would recognize that in general utilizing a fixed threshold value (i.e. uncertainty region) instead of an adaptive one for the purpose of finding a match between the neighbor list stored in the base station and the first plurality of search results is obvious and has the advantage of simplifying and reducing the computational complexity. On the other hand, utilizing a fixed threshold value has the disadvantage of reducing computational accuracy. Therefore, it would have been obvious to one of ordinary skill in the art to utilize a fixed threshold value since it was known in the art that utilizing a fixed threshold value (i.e. uncertainty region) instead of an adaptive one for the purpose of finding a match between the neighbor list stored in the base station and

the first plurality of search results is obvious and has the advantage of simplifying and reducing the computational complexity and the disadvantage of reducing computational accuracy.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dahlman et al and further in view of Papageorngiou et al, further in view of Mathew et al (US 2004/0161020).

As to claim 15, Dahlman discloses performing cell searching on the first plurality of search results to detect the secondary synchronization sequence (i.e. step 2; Fig. 1; Col. 2, Lines 38-67); and generating an indicator identifying the scrambling code (step 3) transmitted at the offset of search result of the first plurality of search results (Col. 2, Lines 38-67). Dahlman and Papageorngiou are silent about correlating the received signal with each of the subset of scrambling codes until the correlation value exceeds a threshold value and generating an indicator to identify the scrambling code transmitted at the offset of the search result of the first plurality of search results. Mathew, in the same field of endeavor, teaches correlating the received signal with each of the subset of scrambling codes until the correlation value exceeds a threshold value and generating an indicator to identify the scrambling code transmitted at the offset of the search result of the first plurality of search results (Fig. 4 and 7-9). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Mathew with Dahlman and Papageorngiou in order to determine a correct code from a group of

codes by correlating the received signal with each of scrambling codes until the correlation value exceeds a threshold value (Pg. 6, Par. 45).

Allowable Subject Matter

Claims 9-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tamura (us 2005/0025087) see paragraphs 42 and 45; Amerga et al (US 2004/01161101) see paragraph 95; Raith (US 5,574,996) see figure 3; Ishikawa et al 9US 6,697,622) see figures 7-11; and Tanno et al (US 2002/0034944) see paragraphs 15 and 59.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freshteh N. Aghdam whose telephone number is (571) 272-6037. The examiner can normally be reached on Monday through Friday 9:00-5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Freshteh Aghdam
January 26, 2007

KEVIN BURD
PRIMARY EXAMINER